



STATE OF SOUTH DAKOTA
WILLIAM J. JANKLOW, GOVERNOR

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Comments by William J. Janklow, Governor, South Dakota

In Response to:

**NOTICE OF PROPOSED RULEMAKING AND ORDER ESTABLISHING
JOINT BOARD**

CC Docket No. 96-45

A handwritten signature in cursive script, likely of William J. Janklow.

Noted Original
12/16/96

Handwritten initials or a signature, possibly "QJY", written over the stamp.

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Impact of Telecommunications Act of 1996
on Rural America-South Dakota
April 8, 1996

South Dakota's Telecommunications Needs

South Dakota is the most rural state in America. There are 58 American cities that have more people than our entire state. Of our 308 incorporated municipalities, 62 percent have fewer than 500 people. Of our 230 public and non-public high schools, 53 percent have fewer than 100 students. Nationally, 27 percent of public schools are classified as "rural." In South Dakota, that number is 72 percent.

South Dakota, as with the rest of rural America, has struggled in recent years to overcome the lack of a robust, public, switched information handling (voice, data, video) telecommunications infrastructure. We are proud of our successes but will not be satisfied until future upgrades make us fully competitive in the new global telecommunications arena. Vast physical distances in rural America lead to a remoteness from jobs, markets, educational opportunities and cultural resources. Telecommunication has been identified as a singularly important tool in reducing and removing this isolation, offering fiscal, cultural, and educational opportunities and benefits to rural America. There is a need across rural America in our schools, libraries, hospitals and businesses (large and small), as well as in our state and local governments, for a communication infrastructure capable of supporting applications far beyond the current capacity of the public voice network as it exists today. Applications such as video conferencing, distance learning, telemedicine, and data networking require a vastly new and enhanced

narrowband, wideband, and broadband network infrastructure with many specific technical and functional requirements.

Such a network must be:

- Ubiquitous-universally accessible.
- Feature Rich-beyond mere transport, the network must provide certain features and functionality.¹
- Robust-able to sustain the rigors of growth and extensive public use.
- Secure-the network must physically preclude unwanted access to information prior to the addition of encryption.
- Survivable-the information network cannot go down!--must meet and exceed standards set by today's telephone network.
- Addressable-the ability to connect and communicate with a specific person easily and securely on a dial-up basis.
- Switched-circuit, packet, channel type switching-each suited to specific application requirements.
- Symmetric-two way, equal bandwidth both ways.
- Cost Effective.

This new network would operate at the narrowband rate of 164 Kbps to 144 Kbps, wideband rates of 144 Kbps to 45 Mbps, and eventually at broadband rates of multiples of 50 Mbps.

¹ Data Features including: broadcast, multicast, delayed delivery, packet interleaving, byte interleaving, code conversion, polling, inquiry facility, three attempt limit, low error rate, data collection service, high/low grades of service, standard interface, bit sequence independence, short set-up, auto call back, redirection of calls, speed/format transforms, abbreviated address calls, closed user groups, short clear-down, manual/auto calling and answering. Data service classes, barred access, remote terminal id, multi-address call...

As information becomes the product of the Information Age, the telecommunications infrastructure becomes the railway and highway, offering access to data content and providing a means of delivering information goods to market. Thus, the very real danger of creating a society of information haves and have nots very quickly transforms itself into economic haves and have nots. An advanced telecommunications infrastructure could enable rural America to **grow and flourish**. This same technology could also destroy rural America if remote communities are denied access to it-much the way towns away from the railroads and later the interstate highway system quickly perished once those infrastructures were established!

If rural America is to realize the salutary benefits of the Information Age, a robust Telecommunications Infrastructure must be ubiquitously established, offering all Americans equitable access to these new narrowband, wideband and broadband services. The infrastructure is the essential key, the foundation supporting the free, open and competitive information marketplace.

Impact of the Telecommunications Act on South Dakota

In reviewing the impact of the Telecommunications Act of 1996 on South Dakota, we have identified several areas of concern that must be addressed to establish an environment that protects the existing voice network and enables an enhanced public information network to be established.

The Telecommunications legislation breaks up the local telephone monopoly-opening the existing voice telephone network infrastructure in the hopes of encouraging competitive free market forces to establish a proliferation of new enhanced network service offerings as well as of lowering the cost of these and existing telecommunications services. However, the current voice

telephone network, in its present form, is ill-suited to support the host of advanced narrowband, wideband and broadband voice, data, and video services that today's information users require. The accelerated "deployment of advanced telecommunications and information technologies and services to all Americans"² envisioned by the Telecommunications Act cannot be realized until an enhanced network infrastructure capable of supporting enhanced services and applications is first established. Indeed, the free market will likely perform well at overlaying a host of new innovative services at competitive prices once a robust underlying public infrastructure has been established. But to achieve such an infrastructure, history shows us that as with the canals, railroads, telephones, and interstate highway system, government must provide the appropriate direction and incentives within the competitive environment to formulate the right infrastructure everywhere-even in rural America. This must also be done with the realization that competition does not always work the same way in rural areas as it does in the urban environments. To promote merely a series of disjointed, limited, autonomous networks would be a disservice to America and would not achieve the Information Highway required to meet our application needs, nor those of our children.

Some people fear that the legislation lacks proper incentives to encourage such an upgrade of the existing infrastructure and the deployment of new advanced infrastructures. They contend open access for resellers will likely act as a disincentive to local service providers who would incur the large cost of upgrading their network-only to see resellers cherry pick the key early entrant

² Telecommunications Act of 1996.

customers that have traditionally been used to offset the initial cost of the upgrade. Safeguards in the Act should be implemented to prevent their activity. The ability of resellers who, under the Act, seek to buy existing services at wholesale rates and cream skim the local market is a great concern. This may in fact have a detrimental effect on the price of local phone service for most consumers without providing any appreciable new enhanced services. Again, safeguards should be implemented.

Indeed, in the new competitive arena, the incentive to own existing POTS networks is diminished-as evidenced by the flight of RBOCs/LECs who are in the process of selling off their remote exchanges throughout rural America. They have chosen to focus on the most densely populated (and thus the most profitable) in-state, out-of-state, out-of-region, and out-of-country regions.

The flight of traditional LECs, coupled with stringent collocation, resale, unbundling, and interconnection requirements, may quickly result in a world in which America has lost its Keepers of the Network. Those who assume the role (and significant expense) of becoming this protector of the network, must insure that the basic (lifeline) infrastructure does not go down. This includes arduous testing, integrating, maintaining, and operating tasks as they are interconnected with other networks and is especially true where collocation with other network elements/systems is involved. Who will bear this cost now-especially in the rural arena, which is left with the least cost effective area to serve?

Interconnection, collocation, and unbundling can represent a very real danger to the existing network if appropriate rational limits and boundaries are not established to prevent abuse of the voice telephone network. While the technology arena does offer nearly limitless potential, individual technologies

do have very real limits. (As with the carpenter's tools-each has a specific purpose and it would be an abuse of that, too)--say a screwdriver-to use it for a task for which it was not designed-e.g. chiseling with a screwdriver. The result is a poor job chiseling and damage to the screwdriver, inhibiting its subsequent ability to perform the task for which it was designed!) So too with the voice telephone network that is increasingly being asked to function as a data network with its short holding times and multiple attempts or extraordinary long holding times for Internet access. The Internet (a data network) too is facing abuse from voice and real time video conferencing applications. Such abuse often results in brown outs, loss of service, and dramatic increases in the cost of operating the network so inefficiently. These costs are ultimately passed along to the customer.

Collocation offers its own special dangers to a network. As complex pieces of equipment interconnect, how will blame and liability be established as one system causes the other to fail? In a wide-open game of interconnection and collocation, the network will be vulnerable to unanticipated situations resulting in possible catastrophic failures. Again, appropriate safeguards must be established to insure the survivability of our public infrastructure. As hospitals and businesses move their data handling applications fully "on line," the cost of such a catastrophic failure of the network in human and financial terms escalates dramatically.

Conclusion

The FCC's final recommendations must address and resolve these issues and concerns, as they consider their course of action dealing with:

- 1) Protecting the existing infrastructure for lifeline services.
- 2) Ensuring that an enhanced Information Infrastructure is established for rural America.
- 3) Managing the Universal Service Fund to insure that all participants contribute appropriately and money is fairly distributed to rural America.